

ABSTRACT

A first signal containing a noise characteristic such as ingress, a data signal component, and a known sequence of symbols is transmitted from a client to a headend via a transmission channel within a communication network. A model of the transmission channel in the absence of the noise characteristic is then generated, the known sequence of symbols is applied to the transmission channel model, and the output of the transmission channel model is compared to the received signal to dynamically estimate the noise characteristic. The dynamically estimated noise characteristic is then used to modify the signal either at the client or the headend to reduce the impact of the noise characteristic on the transmitted data.